WHAT IS CLAIMED IS:

1. A spin-valve magnetoresistive thin film element, comprising:

an antiferromagnetic layer;

a pinned magnetic film contacting said antiferromagnetic layer, wherein a magnetizing direction is pinned by an exchange coupling magnetic field between said pinned magnetic layer and said antiferromagnetic layer;

a free magnetic layer; and

a nonmagnetic electrically conductive layer formed between said free magnetic layer and said pinned magnetic film, wherein a magnetizing direction of said free magnetic layer is aligned so as to intersect with said magnetizing direction of said pinned magnetic film,

wherein said pinned magnetic film includes a first pinned magnetic layer contacting said antiferromagnetic layer and a second pinned magnetic layer and a nonmagnetic intermediate layer therebetween, wherein said first pinned magnetic layer and said second pinned magnetic layer have different thicknesses;

wherein said antiferromagnetic layer comprises one of an X-Mn alloy, where X is selected from the group consisting of Pt, Pd, Ir, Rh, Ru, Os and combinations thereof, and a Pt-Mn-X' alloy, where X' is selected from the group consisting of Pd, Ir, Rh, Ru, Os, Au, Ag and combinations thereof; and

wherein said exchange coupling magnetic field has an intensity of at least about 1 kOe.

2. A spin-valve magnetoresistive thin film element according to Claim 1, wherein said antiferromagnetic layer comprises a PtMn alloy.

3. A spin-valve magnetoresistive thin film element according to Claim 1, wherein said antiferromagnetic layer comprises a Pt-Mn-Pd alloy.

4. A spin-valve magnetoresistive thin film element according to Claim 1, wherein a ratio of said thickness of said first pinned magnetic layer and said thickness of said second pinned magnetic layer is in a range selected from the group consisting of about 0.53 to about 0.95 and about 1.05 to about 1.8.

5. A spin-valve magnetoresistive thin film element according to Claim 1, wherein a film thickness of said first pinned magnetic layer and a film thickness of said second pinned magnetic layer are both in a range of about 10 to about 50 angstroms, and wherein an absolute value of film thickness of said first pinned magnetic layer minus said film thickness of said second pinned magnetic layer is at least about 2 angstroms.

6. A spin-valve magnetoresistive thin film element according to Claim 1, wherein the thickness of said nonmagnetic intermediate layer is in a range of about 4.0 to about 9.4 angstroms.

7. A spin-valve magnetoresistive thin film element according to Claim 1, wherein the thickness of said nonmagnetic intermediate layer is in a range selected from the group consisting of about 2.8 to about 6.2 angstroms and about 6.8 to about 10.2 angstroms.

8. A spin-valve magnetoresistive thin film element according to Claim 1, wherein the thickness of said antiferromagnetic layer is in a range of about 100 to about 200 angstroms.

9. A thin film magnetic head, comprising shield layers formed above and below the spin-valve magnetoresistive thin film element according to Claim 1, with gap layers therebetween.

10. The spin-valve magnetoresistive thin film element according to Claim 1, wherein said nonmagnetic intermediate layer comprises at least one element selected from the group consisting of Ru, Rh, Ir, Cr, and Re.

11. The spin-valve magnetoresistive thin film element according to Claim 1, wherein said exchange coupling magnetic field has an intensity of at least about 2 kOe.

12. The spin-valve magnetoresistive thin film element according to Claim 1, wherein said exchange coupling magnetic field has an intensity of at least about 3.5 kOe.

13. A spin-valve magnetoresistive thin film element, comprising:

an antiferromagnetic layer;

a pinned magnetic film contacting said antiferromagnetic layer, wherein a magnetizing direction is pinned by an exchange coupling magnetic field between said pinned magnetic film and said antiferromagnetic layer; and

a free magnetic layer;

a nonmagnetic electrically conductive layer formed between said free magnetic layer and said pinned magnetic film, wherein a magnetizing direction of said free magnetic layer is aligned so as to intersect with the magnetizing direction of said pinned magnetic film;

wherein said pinned magnetic film includes a first pinned magnetic layer contacting said antiferromagnetic layer and a second pinned magnetic layer and a nonmagnetic intermediate layer therebetween;

wherein a product of saturation magnetization Ms and film thickness t is a magnetic film thickness, wherein said first pinned magnetic layer and said second pinned magnetic layer have different magnetic film thicknesses;

wherein said antiferromagnetic layer comprises one of an X-Mn alloy, where X is selected from the group consisting of Pt, Pd, Ir, Rh, Ru, Os and combinations thereof, and a Pt-Mn-X' alloy, where X' is selected from the group consisting of Pd, Ir, Rh, Ru, Os, Au, Ag and combinations thereof; and

wherein said exchange coupling magnetic field has an intensity of at least about 1 kOe.

14. A spin-valve magnetoresistive thin film element according to Claim 13, wherein said antiferromagnetic layer comprises a PtMn alloy.

15. A spin-valve magnetoresistive thin film element according to Claim 13, wherein a ratio of said magnetic film thickness of said first pinned magnetic layer and said magnetic film thickness of said second pinned magnetic layer is in a range selected form the group consisting of about 0.53 to about 0.95 and about 1.05 to about 1.8.

16. A spin-valve magnetoresistive thin film element according to Claim 13, wherein said film thickness of said first pinned magnetic layer and said film thickness of said second pinned magnetic layer are both in a range of about 10 to about 50

angstroms, and wherein the absolute value of said film thickness of said first pinned magnetic layer minus said film thickness of said second pinned magnetic layer is at least about 2 angstroms tesla.

17. A spin-valve magnetoresistive thin film element according to Claim 13, wherein said thickness of said nonmagnetic intermediate layer is in a range of about 4.0 to about 9.4 angstroms.

18. A spin-valve magnetoresistive thin film element according to Claim 13, wherein said thickness of said nonmagnetic intermediate layer is in a range selected from the group consisting of about 2.8 to about 6.2 angstroms and about 6.8 to about 10.2 angstroms.

19. A spin-valve magnetoresistive thin film element according to Claim 13, wherein the thickness of said antiferromagnetic layer is in a range of about 100 to about 200 angstroms.

20. The spin-valve magnetoresistive thin film element according to Claim 13, wherein said nonmagnetic intermediate layer comprises at least one element selected from the group consisting of Ru, Rh, Ir, Cr, and Re.

21. A thin film magnetic head, comprising shield layers formed above and below the spin-valve magnetoresistive thin film element according to Claim 13, with gap layers therebetween.

22. The spin-valve magnetoresistive thin film element according to Claim 13, wherein said exchange coupling magnetic field has an intensity of at least about 2 kOe.

23. The spin-valve magnetoresistive thin film element according to Claim 13, wherein said exchange coupling magnetic field has an intensity of at least about 3.5 kOe.

24. A spin-valve magnetoresistive thin film element according to Claim 13, wherein said antiferromagnetic layer comprises a Pt-Mn-Pd alloy.